Orthocarpus tenuifolius
Thin-leaved Owl Clover
by Kathy Lloyd, Montana Native Plant Society

Thin-leaved owl clover was collected on July 1 or 2, 1806 near Traveler's Rest in present-day Missoula County. Meriwether Lewis collected four additional plants during that two-day period, including bitterroot (*Lewisia rediviva*). Although no direct mention of thin-leaved owl clover is made in the journals, on July 2, 1806 Lewis says, "I found several other uncommon plants specemines of which I preserved." Gary Moulton, editor of *The Journals of the Lewis & Clark Expedition* suggests that one of these may have been thin-leaved owl clover. Frederick Pursh, the botanist who looked at the expedition's plant collection and was first to publish information about the new plant species discovered on the journey, attached a label to the specimen that reads, "Valley of Clarks R. Jul. 1st 1806." Clark's River was the name Lewis and Clark gave the present-day Bitterroot River and the expedition camped at Traveler's Rest in the Bitterroot Valley on July 1 and 2, just prior to splitting the expedition into two main groups. Pursh named the plant *Bartsia tenuifolius*, but the name was changed to *Orthocarpus tenuifolius* and remains so today. The thin-leaved owl clover specimen traveled with Lewis over present-day Lewis & Clark Pass and down the Missouri River to St. Louis. It was one of a group of plant specimens that was presumed lost until they were discovered at the American Philosophical Society in Philadelphia in 1896. The specimen is now housed at the Lewis & Clark Herbarium at the Academy of Natural Sciences in Philadelphia, on permanent loan from the American Philosophical Society.

A member of the figwort family (Scrophulariaceae), thin-leaved owl clover is an erect annual plant from four to 12 inches in height. It may have a single stem or be branched with several stalks. The narrow leaves have short hairs and are alternate on the stem; the upper leaves are cleft. In fact, *tenuifolius* means narrow-leaved. The conspicuous pink-yellow bracts partly hide the small, yellow flowers that are interspersed among the bracts. This combination of vibrant colors is attractive to pollinating insects and birds. At first glance, owl clover species resemble Indian paintbrushes, also members of the figwort family. However, the flowers of Indian paintbrush species have an upper lip that is longer than the lower lip and the plants are mostly perennial. Owl clover species have a hooked upper flower lip that is only slightly longer than the lower lip, and owl clover species are all annuals. *Ortho* is Greek for straight, and *karpos* means fruit. Hence the name *Orthocarpus* refers to the symmetrical capsules produced by the plant. The origin of the common name, owl clover, is less clear. It may refer to the eye-like spots on the petals of some *Orthocarpus* species. Others believe the rounded flower tops resemble an owl's head, with the projecting flowers being the owl's ears. Owl clover, along with many other members of the figwort family such as Indian paintbrush and lousewort, is a root hemiparasite. While it is capable of creating its own food through photosynthesis, if the first roots emerging from a germinating owl clover seed find themselves near roots of a neighboring plant of a different species, it will develop specialized roots that grow into the inner tissues of the host plant's roots. By doing so, it obtains water, minerals and energy from the host plant and ultimately improves its growth rate.

In addition to the vicinity of Traveler's Rest, you can find thin-leaved owl clover in open, dry and often disturbed places in the valleys, plains and hills from British Columbia in Canada south to Montana and Idaho, and in Oregon east of the Cascade Mountains. It is an attractive late spring or summer addition to Montana's prairie and meadow communities.

The Blackfoot Indians used a closely related species, *Orthocarpus luteus* or yellow owl clover, also found in Montana, to make a red dye. The leaves were crushed and pressed into the item to be dyed. Feathers, horsehair and skin were treated in this way.

Thin-leaved owl clover is not used by wildlife and has no value as forage for domestic livestock. However, it has value as an important member of Montana's native flora and a place in Montana history. After all, only 31 plant specimens that were collected by Lewis or Clark in Montana still exist today and thin-leaved owl clover is one of them.